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LETTER TRANSMITTING FINAL FIVE YEAR REVIEW REPORT SITE 12 AND SITE 42 SNWC INDIAN HEAD MD (PUBLIC DOCUMENT)
8/8/2007
JM WALLER ASSOCIATES INC.

J.M.WALLER ASSOCIATES
MANAGING THE VISION

August 8, 2007

Joseph Rail
NAVFAC Washington
1314 Harwood St. SE
Washington, DC

Dear Mr. Rail:

JM Waller Associates (JMWA) is pleased to provide you with two (2) copies of the *Final Five Year Review Report for Site 12- Town Gut Landfill and Site 42 Olsen Road Landfill (August 2007)* located at the Naval Support Facility in Indian Head, MD. Comments from USEPA Region III and Maryland Department of Environment have been incorporated into this report. Each paper copy of the report also includes a CD with a PDF version of the documents. Also included are the *Final Summaries (Fact Sheets) for Sites 12 and 42* on thick, high gloss paper. If you have any questions, please contact me at 703-912-2903.

Sincerely,

Erich Sonnenberg, PE
JM Waller Associates
Senior Project Manager

Attachment: *Final Five Year Review Report for Site 12- Town Gut Landfill and Site 42 Olsen Road Landfill (August 2007)*

cc: Shawn Jorgensen, NSF – IH (4 copies)
Dennis Orenshaw, USEPA Region III (2 copies)
Curtis DeTore, MDE (2 copies)
George Latulippe, TtNUS *(1 copy)*

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Web: www.jmwaller.com 703-912-2903 Fax: 703-912-2905/7989

Next Review

The next Five-Year Review is scheduled to be completed by 2012.

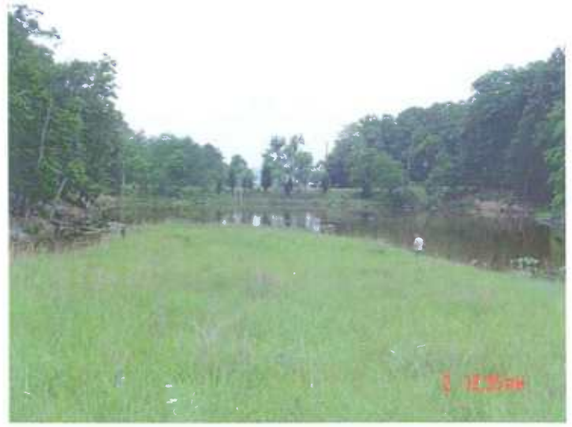
For Further Information...

The Five-Year Review report and other technical documents for the Naval Support Facility at Indian Head are available to the public. The complete records for Site 12 can be found at the following Information Repository locations:

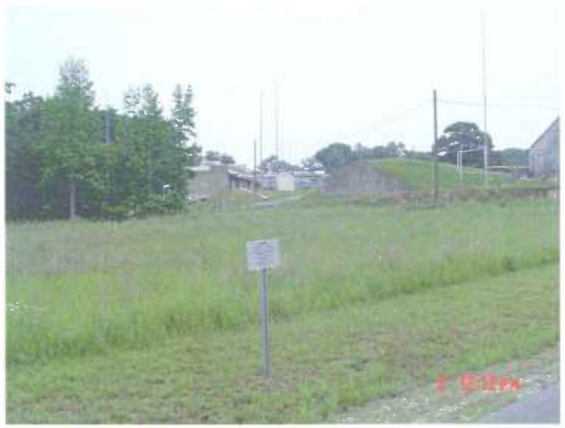
General Library
Naval Support Facility, Indian Head
4163 North Jackson Road, Suite 104
Indian Head, MD 20640-5117

NAVFAC Washington Library
1314 Harwood Street, SE
Washington Navy Yard, DC 20374

For more information on the Site 12 Five-Year Review or the Navy's Installation Restoration Program, please contact Mr. Joseph Rail at joseph.rail@navy.mil or at 202-685-3105.



View from Atkins Road Extension Looking South



View from Atkins Road Extension Looking East

Five-Year Review Summary (May 2007)

Site 12 – Town Gut Landfill
Naval Support Facility, Indian Head, Maryland

Introduction

The purpose of the Five-Year Review is to document whether the removal action implemented at Installation Restoration (IR) Site 12 - Town Gut Landfill at the Naval Support Facility, Indian Head (NSF-IH) in Indian Head, Maryland, is protective of human health and the environment. This summary identifies issues found during the review and identifies recommendations to address them. The Department of the Navy (Navy) is the lead agency for site activities at NSF-IH. The US Environmental Protection Agency Region 3 (EPA) and the Maryland Department of Environment (MDE) are the support agencies.

The Navy has conducted the Five-Year Review to satisfy the requirements of Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). A Record of Decision (ROD) was signed in September 2004 identifying Five-Year Reviews as a component of the selected removal action.

This is the first Five-Year Review for the NSF-IH facility. The triggering action for this review was the initiation of a removal action at Site 12 - Town Gut Landfill on September 9, 2002. A Five-Year Review is required because hazardous substances, pollutants, or contaminants remain at Site 12 above levels that allow for unlimited use and unrestricted exposure.

Site History and Description

Site 12 - Town Gut Landfill is located near the center of the main area of NSF-IH and covers an area of approximately 4 acres and reportedly contains approximately 70,000 cubic yards (CY) of mixed solid waste materials, primarily landscaping wastes, tree stumps, and construction debris. Between 1968 and June 1980, Site 12 was used to dispose of landscaping waste, fill material, and rubble. Reportedly, material from outside the facility was also disposed at the site until 1972. Some of the unauthorized items reportedly disposed at Site 12 included paint, varnish, and other chemical waste.

Site 12 is divided into three portions identified as the northern, central, and southern portions. Atkins Road Extension, which is oriented in a northwest-southeast direction separates the southern portion from the other two portions. A pond is located adjacent to the western and southern sides of the northern portion of the site. Another pond is located adjacent to the western and southern sides of the southern portion of the site. The ponds are connected via a 78-inch culvert located under Atkins Road Extension. Runoff from the site flows into these two ponds and discharges to Mattawoman Creek, which eventually discharges to the Potomac River.

NSF-IH was placed on the National Priorities List (NPL) in September 1995. A Remedial Investigation (RI) was initiated at Site 12 in 1997. The investigation included a geophysical investigation, installation of soil borings and shallow groundwater monitoring wells, and collection and analysis of surface soil, shallow groundwater, surface water, and sediment samples. The Feasibility Study (FS) and the Proposed Plan were completed in January 2001. An Engineering Evaluation/Cost Analysis (EE/CA) and Action Memorandum for a non-time critical removal action were prepared in 2002. A Removal Action (RA) to remove waste and install a soil cover in addition to removing debris from the shores of the ponds was completed in 2002. Groundwater sampling in connection with long-term

monitoring commenced in March 2004 and continues to the present for the purpose of ensuring that contaminants have not migrated from the landfill.

The shallow groundwater beneath Site 12 occurs primarily under unconfined (water table) conditions. Shallow groundwater flows toward and into the adjacent surface water (ponds). Not only is the shallow groundwater zone not currently used as a potable water supply, but such use is prohibited by institutional controls. Drinking water is obtained from a deeper aquifer, which is located at a depth of over 190 feet. The water supply wells for the Town of Indian Head are located laterally of any potential NSF-IH discharges. No private or public water supply wells are affected by Site 12.

Removal Action

The selected remedy included waste removal and addition of a vegetated soil cover, land use controls, and long-term monitoring. The land use controls prohibit the following activities: use of shallow groundwater as a potable water source, residential use, and any construction activities that could compromise the integrity of the soil cover. The ROD also provided for the periodic collection and analysis of groundwater and surface water samples and review of the removal action performance every five years.

Issues and Recommendations

During the Five-Year Review process, the Navy is required to answer the following questions:

- Is the remedy functioning as intended by the decision documents?

  YES.

- Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives (cleanup goals) used at the time of remedy selection still valid?

  YES, IN JANUARY 2006, THE MAXIMUM CONTAMINATION LIMIT (MCL) FOR ARSENIC INCREASED FROM 5 ug/L TO 10 ug/L, AND THE OCTOBER 2006 VERSION OF THE EPA REGION 3 RISK BASED CRITERIA (RBC) INDICATES THAT THE RBC FOR IRON IN TAP WATER HAS DECREASED FROM 22,000 ug/L TO 11,000 ug/L. GIVEN THAT THE BASIS IN THE LONG-TERM MONITORING PLAN FOR THE CLEANUP LEVELS FOR THESE ANALYTES ARE BASED ON THE MCL AND THE TAP WATER RBC RESPECTIVELY, THE NAVY SHOULD EXPECT TO HAVE TO MEET THESE NEW CRITERIA.

- Has any other information come to light that calls into question the protectiveness of the remedy? NO.

As a result of the Five-Year Review process, three issues and their associated recommendations are listed below:

Issue: The height of vegetation on the soil cover is excessive (waist high) and may allow the growth of saplings.

Recommendation: Vegetation on the landfill should be cut annually to reduce the potential for saplings to grow.

Issue: Excessive vegetation and debris are present in some of the rip-rap lined channels.

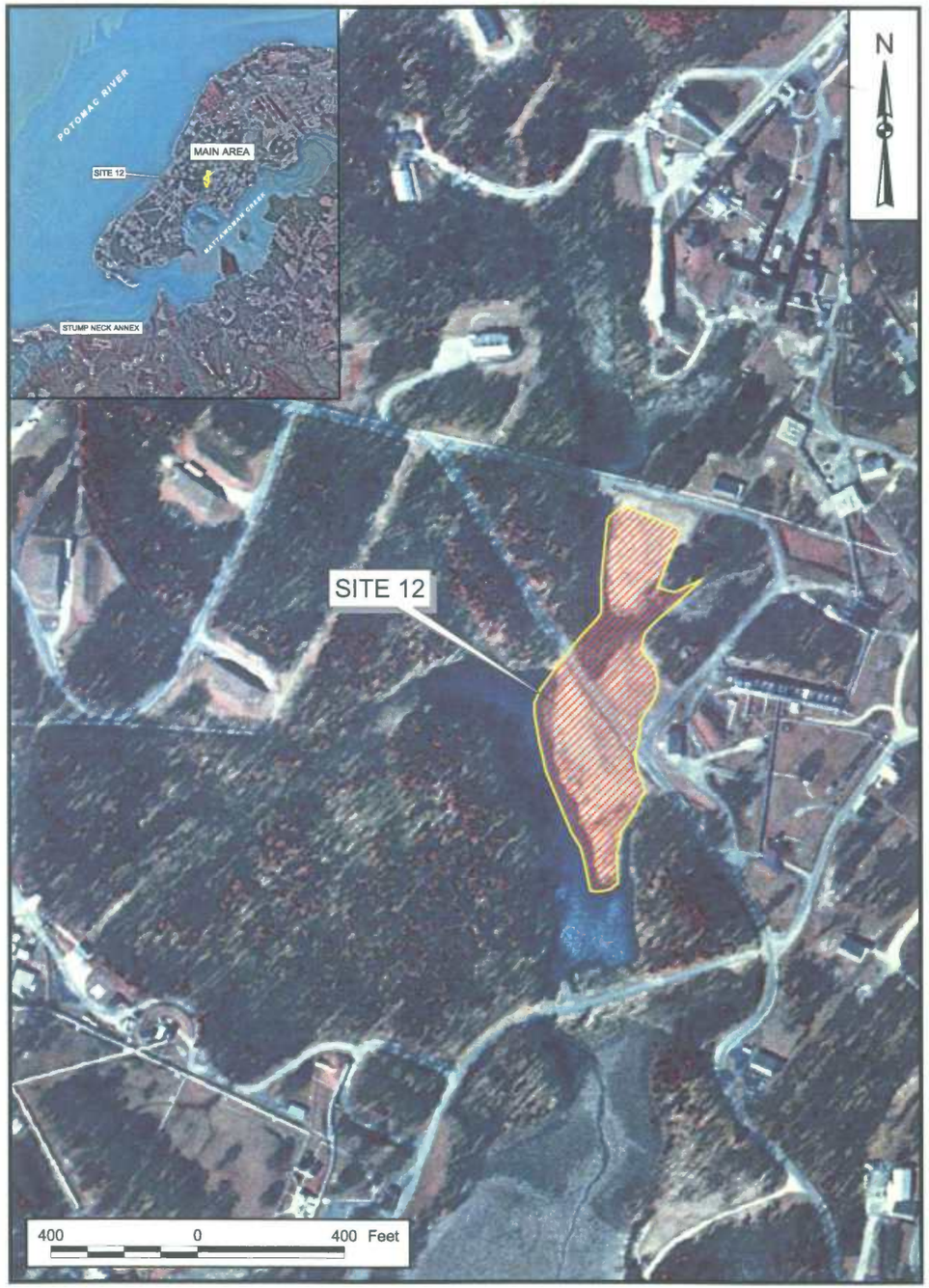
Recommendation: Vegetation that extends above the rip rap and debris should be removed from the rip-rap channels as a preventive measure because they tend to obstruct flow in the channel.

Issue: Locks on the monitoring wells are rusted or missing.

Recommendation: New locks should be installed on all wells.

Protectiveness

The remedy for the Town Gut Landfill is protective of human health and the environment. Land use controls have been effective in prohibiting usage of groundwater as a potable water supply and prohibiting construction activities that could affect the integrity of the cover system. The landfill cover has prevented receptor exposure to the solid waste and is expected to prevent erosion, which will protect both human and environmental receptors. Groundwater and surface water monitoring is in place to ensure that contaminants do not migrate beyond the site boundary.



Site Location Map

Next Review

The next Five-Year Review is scheduled to be completed by 2012.

For Further Information...

The Five-Year Review report and other technical documents for the Naval Support Facility at Indian Head are available to the public. The complete records for Site 42 can be found at the following Information Repository locations:

General Library
Naval Support Facility, Indian Head
4163 North Jackson Road, Suite 104
Indian Head, MD 20640-5117

NAVFAC Washington Library
1314 Harwood Street, SE
Washington Navy Yard, DC 20374

For more information on the Site 42 Five-Year Review or the Navy's Installation Restoration Program, please contact Mr. Jeffrey Morris at jeffrey.w.morris@navy.mil or at 202-685-3279.

Western Drainage Ditch, Looking Northeast

Junction of Asphalt and Soil Portions of Engineered Cap

Stream and Gabion Wall at Southern Toe of Landfill

Five-Year Review Summary (May 2007)

Site 42 – Olsen Road Landfill
Naval Support Facility, Indian Head, Maryland

Introduction

The purpose of the Five-Year Review is to document whether the remedial action implemented at Installation Restoration (IR) Site 42 – Olsen Road Landfill at the Naval Support Facility, Indian Head (NSF-IH) in Indian Head, Maryland, is protective of human health and the environment. This summary identifies issues found during the review and identifies recommendations to address them. The Department of the Navy (Navy) is the lead agency for site activities at NSF-IH. The US Environmental Protection Agency Region 3 (EPA) and the Maryland Department of Environment (MDE) are the support agencies.

The Navy has conducted the Five-Year Review to satisfy the requirements of Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). A Record of Decision (ROD) was signed in September 2005 identifying Five-Year Reviews as a component of the selected remedial action.

This is the first Five-Year Review for the NSF-IH facility. The triggering action for this review was the initiation of the removal action at Site 12 - Town Gut Landfill in September 2002. A Five-Year Review is required because hazardous substances, pollutants, or contaminants remain at Site 42 above levels that allow for unlimited use and unrestricted exposure.

Site History and Description

Site 42 – Olsen Road Landfill is located near the southern end of the main area of NSF-IH and covers an area of approximately 1.5 acres. The landfill area includes a portion of the paved area south of Building 1866 and the undeveloped land west, southwest, and south of Building 1866. Between 1982 and 1987 and in 1992 during construction of the building, the area was used as an unauthorized disposal site for solid wastes. Waste included construction and demolition debris, cut wood logs, charred wood, metal debris, and demolished steel drums. The unauthorized disposal area was not lined and there were no historical records of hazardous waste disposal within the limits of the landfill. The Feasibility Study (FS) estimated that the volume of landfilled waste was approximately 13,300 cubic yards.

Although the topography of the site has changed over time, the general direction of surface water runoff continues to be toward the unnamed stream south of the site. Three drainage channels located within and adjacent to the Olsen Road Landfill convey storm water runoff and steam line condensate to the unnamed stream, which conveys flow southeastward toward Industrial Wastewater Outfall 71. From this outfall, flow continues in the unnamed stream southward toward Mattawoman Creek, which eventually discharges into the Potomac River.

NSF-IH was placed on the National Priorities List (NPL) in September 1995. A Remedial Investigation (RI) was initiated at Site 42 in 1997. The investigation included installation of an additional shallow groundwater monitoring well (two temporary and four permanent wells were installed during previous investigations) and collection and analysis of surface soil, groundwater, surface water, and sediment samples. Additional activities were performed at Site 42 in 1999 to fill data gaps as part of the FS. Investigations were performed at Site 42 in 2002 and 2003 to better define the extent of the landfill and to provide additional shallow groundwater data to aid in the preparation of a Remedial Design (RD). The ROD was finalized in September 2005. The Remedial Action (RA) at Site 42 commenced in October 2005 and was completed in August 2006. Groundwater and

surface water sampling for long-term monitoring commenced in July 2006 and presently continues for the purpose of ensuring that contaminants have not migrated from the landfill.

The principal sources of water at NSF-IH and within the Town of Indian Head are the Patapsco and Patuxent Formations. The aquifers are separated by the Arundel Formation confining unit. The water supply wells for the Town of Indian Head are located laterally of any potential NSF-IH discharges. No private or public water supply wells are affected by Site 42.

Remedial Action

The selected remedy included construction of an engineered cap system, land use controls, and long-term monitoring. Land use controls prohibit the following activities: use of shallow groundwater as a potable water source, residential use, and any construction activities that could compromise the integrity of the soil cover. The ROD also provided for the periodic collection and analysis of groundwater and surface water samples and review of remedial action performance every five years.

Issues and Recommendations

During the Five-Year Review process, the Navy is required to answer the following questions:

- Is the remedy functioning as intended by the decision documents?

  YES.

- Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives (cleanup goals) used at the time of remedy selection still valid?

  YES, IN JANUARY 2006, THE MAXIMUM CONTAMINATION LIMIT (MCL) FOR ARSENIC INCREASED FROM 5 ug/L TO 10 ug/L AND THE OCTOBER 2006 VERSION OF THE EPA REGION 3 RISK BASED CRITERIA (RBC) INDICATES THAT THE RBC FOR IRON IN TAP WATER HAS DECREASED FROM 22,000 ug/L TO 11,000 ug/L. GIVEN THAT THE BASIS IN THE LONG-TERM MONITORING PLAN FOR THE CLEANUP LEVELS FOR THESE ANALYTES ARE BASED ON THE MCL AND THE RBC FOR TAP WATER RESPECTIVELY, THE NAVY SHOULD EXPECT TO HAVE TO MEET THESE NEW CRITERIA.

- Has any other information come to light that calls into question the protectiveness of the remedy?

  NO.

As a result of the Five-Year Review process, one issue and the associated recommendation are listed below:

Issue: Heavy rainfall eroded a newly vegetated area just downgradient of the asphalt cap.

Corrective Action: Temporary erosion and sediment controls were added until vegetation was established.

Protectiveness

The remedy for the Olsen Road Landfill is protective of human health and the environment. Land use controls have been effective in prohibiting usage of groundwater as a potable water supply and prohibiting construction activities that could affect the integrity of the engineered cap system. The landfill cover has isolated the solid waste and is expected to prevent erosion, which will protect both human and environmental receptors. Groundwater and surface water monitoring is in place to ensure that contaminants do not migrate beyond the site boundary.

Site Location Map